DOCUMENT RESUME

ED 070 420 HE 003 662

AUTHOR	Stobaugh, Cynthia E.
TITLE	The Effect of College Environment on Student Output.
INSTITUTION	Washington Univ., Seattle. Dept. of Psychology.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-0-0340
PUB DATE	Jan 72
GRANT	OEG-0-70-3347
NOTE	51p.; Technical Report 72-31
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Church Related Colleges; *College Environment; *Environmental Influences; *Higher Education; Small Schools; Student Attitudes; *Student Characteristics; *Student Interests; Student Motivation

ABSTRACT

This study investigates the effects of the academic environment of a small, Christian liberal arts college on students' later activities, and the effects of the college on different types of students. Alumni from the classes of 1965 and 1966 were asked why they attended the college and to provide information about experiences they had at the college and their life since graduation. No general differences in college experiences were found for alumni who did or did not attend graduate school, for alumni who did or did not hold a job related to their major, for alumni in various occupations, and for alumni at different income levels. The college environment did, however, provide distinctly different experiences for different types of students. Students who attended the college because they liked its smallness placed greater emphasis on liberal social goals. They were more socially active as students, and continued this trend after graduation through greater participation in community activities. Students who attended the college because they liked its Christian environment placed greater emphasis on conservative social goals and participated more in the formal education process. Results indicate that different students tend to seek out experiences that reinforce their already existing beliefs and interests. (Author)

ED 070420

NCERA
HE
BRO-0340

ORGANIZATIONAL RESEARCH

DEPARTMENT OF PSYCHOLOGY • UNIVERSITY OF WASHINGTON, SEATTLE, WASHINGTON

HE 003 662

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

ORGANIZATIONAL RESEARCH
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON

ED 070420

THE EFFECT OF COLLEGE ENVIRONMENT ON STUDENT OUTPUT

Cynthia E. Stobaugh

University of Washington
Seattle, Washington

Technical Report 72-31

January, 1972

U. S. Office of Education, O. E. Bureau of Research
No. 0-0340, Grant No. OEG-0-70,3347

REPRODUCTION IN WHOLE OR IN PART IS PERMITTED FOR ANY PURPOSE OF THE UNITED STATES GOVERNMENT.

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

THE EFFECT OF COLLEGE ENVIRONMENT ON STUDENT OUTPUT

Cynthia E. Stobaugh

University of Washington

Abstract

This study investigates the effects of the academic environment of a small, Christian liberal arts college on students' later activities, and the effects of the college on different types of students. Alumni from the classes of 1965 and 1966 were asked why they attended the college (input) and to provide information about experiences they had at the college (environment) and their life since graduation (output).

No general differences in college experiences were found for alumni who did or did not attend graduate school, for alumni who did or did not hold a job related to their major, for alumni in various occupations, and for alumni at different income levels.

The college environment did, however, provide distinctly different experiences for different types of students. Students who attended the college because they liked its smallness placed greater emphasis on liberal social goals. They were more socially active as students, and continued this trend after graduation through greater participation in community activities. Students who attended the college because they liked its Christian environment placed greater emphasis on conservative social goals and participated more in the formal education process. In summary, results indicate that different students tend to seek out experiences which reinforce their already existing beliefs and interests.

THE EFFECT OF COLLEGE ENVIRONMENT ON STUDENT OUTPUT[1]

Cynthia E. Stobaugh

University of Washington

Certain organizations are specifically designed to affect and influence people who enter them. This is true of penitentiaries and hospitals, as well as of academic institutions with which this study deals. It is not surprising, then, that the effects a given organization has on its "members" has been of considerable interest. Newcomb's (1943) classic study of changes in student values at Bennington College was one of the first to indicate the important impact that the college environment can have on the student.

The Bennington study has been criticized for not considering the effect of student input when determining the effect of the college on the student. Astin (1965) has argued that any obtained relationship between educational practice and student output is necessarily ambiguous so long as no control is exercised over the type of student the college attracts. He has presented a model for educational institutions which is comprised of three conceptually distinct components: (1) student inputs, (2) the college environment, and (3) student outputs. Astin considers student inputs to be the talents, skills, aspirations, and other potentials for growth and learning that the new student brings with him to college. The college environment refers to those aspects of the higher educational institution that are capable of affecting the student. These include administrative policies and practices, curriculum, physical plant and facilities, teaching practices, peer associations, and other characteristics of the college environment. Student outputs are

defined as those aspects of the student's development that the college experience supposedly brings about, that is, achievements, knowledge, skills, values, attitudes, aspirations, interests, and daily activities.

The relationships between the three components are shown in Figure 1.

Insert Figure 1 about here

The principal concern of research on college impact is to determine the effects of college environment on relevant student outputs (relationship B). Relationship A indicates that college environments may be affected by the kinds of students who enroll. Also, there are two types of interaction effects: (1) those in which the effect of input on output is different in different college environments (relationship AC), and (2) those in which the effect of the college environment is different for different types of students (relationship AB).

The present study is concerned with the effects of a small, Christian, liberal arts college on student output (relationship B), and what kinds of effects, if any, the college has on different types of students (relationship AB). According to Astin (1970), relevant student input data are those which affect the student's choice of a college so that the reasons why a student attends a given college give a fairly good indication of student input. Thus, information concerning the students' reasons for choosing the college are used as an indication of the major types of students who attended the college (input). This information was obtained from alumni of the college, in addition to information concerning their experiences at the college (environment), information

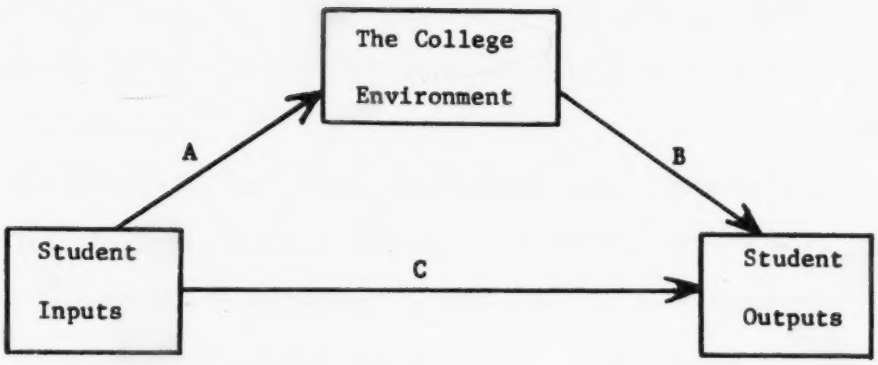
The College
Environment
A
B
Student
Inputs
C
Student
Outputs

Figure 1

about what the alumni had done since graduation (output), and measures of their attitudes concerning what the goals of the college should be (output).

Of particular interest was the problem of whether the college was fulfilling one of the stated aims of Christian-supported liberal arts colleges, namely, the development through a mixture of liberal arts and Christian education of a student who will serve both church and community. This aim is often explicitly stated in the catalogues of such colleges:

> The purpose, then, of California Lutheran College is to provide the intellectual, spiritual, moral, and cultural environment in which a body of competent Christian scholars may seek to identify and nurture the talents and develop the character of the students and guide them into lives of effective service to their fellow men, motivated, and empowered by a love of Christ, Truth, and Freedom [p. 11]. (California Lutheran College Bulletin, 1970-1971).
>
> ...the college...[is] [c]ommitted to the philosophy that genuine scholarship and sound Christian doctrine are necessary for a positive world view, the student is encouraged to prepare himself to be a productive, meaningful person in his society [p. 11]. (Bulletin of Judson Baptist College, 1970).
>
> Accepting the Christian faith as full Revelation, and believing in the teachings of Jesus concerning the worth

> of the individual person, this college community considers education a significant means to the ends of developing the student toward his own best self and increasing his power to worship God and to be of service to men [p. 3]. (Whitworth College Catalogue, 1970-1971).

Different types of students can be expected to put different emphases on the importance of participation in church and community activities. Does the environment of the Christian, liberal arts college actually move these different types of students toward achieving a balance in their emphases on church and community services and a fulfillment of the above goal, or does it affect different types of students in such a way as to reinforce existing emphases?

Method

Subjects. Ss consisted of a random sample of 330 out of the approximately 450 alumni from the classes of 1966 and 1967 at the college.

Questionnaire. The questionnaire (see Appendix A) was divided into seven different sections. Section B was concerned with the reasons why the alumnus attended the college (input), and sections C through F provided information about student experiences at the college (environment). Section A was concerned with the alumnus' attitudes about what the goals of the college should be (output), and section F provided information about what the former student had done since graduation (output).

Procedure. Ss were mailed the questionnaire in May of 1971. A response rate of approximately 60% was obtained with 206 (121 females and 85 males) of the 330 Ss returning the questionnaire.

Sections A through F of the Questionnaire were factor-analyzed, and

2 x 2 analyses of variance were run. Differences were sought between the Ss' factor scores for input and experience (sections B through F) as a function of sex and output. Output was measured by six alumni characteristics obtained from section F (i.e., (1) attendance at graduate school, (2) holding a job related to major at the college, (3) occupation, (4) income, (5) number of hours per month spent in church activities, (6) number of hours per month spent in community activities), and an additional seventh characteristic obtained from the factor analysis of section A, (7) the types of goals considered by the alumnus to be most important for the college.

An explanation of the factors derived from sections A through F of the questionnaire will be presented first, followed by a summary of student input, experiences (environment), and output. Next a report of the relationships found between student input, experiences (environment), and alumni characteristics (output) will be given. Finally, a discussion of the relationships between student college experience (environment) and output, and the effect of college environment on different types of students will be presented.

Factor Analysis of Student Input

Student goals and motivations. In section B of the questionnaire a list of 10 reasons were given for initially enrolling at the college. Ss were asked to rate the importance of each as it applied to them when they first enrolled.

Two major types of students were found to attend the college. The highest factor loadings for Factor I had to do with the opportunity for student-faculty interaction in a small college and the small size of

classes (see Appendix D). Factor I was, therefore, interpreted as representing the type of student who attended and liked the college because of its smallness. The second factor's highest loading was a desire for a Christian education, and next highest was the feeling that the college would be a good place to find the type of spouse one wanted (see Appendix D). Factor II was interpreted as representing the type of student who attended and liked the college because of its Christian environment.

Factor Analyses of Environment

Goals of a liberal arts education. Section C contained 13 statements reflecting more specific goals and objectives of a liberal arts education, including such things as developing academic abilities, the ability to relate with others, and the ability to apply one's education to the real world. Ss were asked how much in their judgment three categories of experience at the college facilitated or hindered their progress toward each of these goals. These were (1) academic programs, (2) activities programs, and (3) living group experiences.

There were three factors which corresponded to the three categories of experience, and each factor contained all 13 goals. Factor I (see Appendix E) was interpreted as the degree to which academic programs facilitated progress toward the goals of a liberal arts education. Factors II (see Appendix F) and III (see Appendix G) were seen as the degree to which activities programs and living group experiences facilitated progress toward these same goals.

Feelings about the college. In section F Ss were asked to rate 17 items having to do with their feelings about the college.

This section revealed two major factors. The first was interpreted as a positive evaluation of the college as a whole, which was determined mainly by how strongly the former student would recommend that others attend the college and how sure he was that he would attend the college again if he had it to do over (see Appendix K). The second factor was more a positive evaluation of education at the college, which included ratings of how adequate the alumnus' education was in preparing him for his occupation, his satisfaction with his overall education at the college, and the adequacy of instruction in his major (degree) area (see Appendix K).

Activities. In section D of the questionnaire, Ss were asked to indicate when and whether they participated in various activities. The number of years Ss participated in each activity was then summed and the factor score for each S was determined by finding the average number of years across all items contained in the factors obtained from the factor analysis of the section. All averages were based on a maximum of four years of participation.

The highest loadings associated with the first factor were concerned with religious activities. However, other activities were also found to have high loadings. The factor can be seen as an overall measure of participation in campus activities and clubs (see Appendix H). The second factor which is bipolar seems to measure the degree to which the student was campus-centered while at the college. Positive factor loadings included living in a dormitory on campus and participation in campus activities and clubs, while negative factor loadings included living off campus, having a personal automobile available, and being married (see Appendix I).

Life as a student. Section E consisted of 15 items describing various aspects of a student's personal life at the college. Respondents were asked to rate each of these items according to how accurately they described their life while at the college.

There were two resulting factors. The first was interpreted as a measure of social participation and included participation in informal social activities, the extent that the individual was in the "life-style" mainstream, how many casual friends he had, etc. (see Appendix J). The second factor was interpreted as a measure of how much the individual participated actively in education and included such things as how often he talked informally with faculty on both course and non-course related matters, how often he participated in classroom discussion and in arguments with the instructor or other students (see Appendix J).

Factor Analysis of Student Output

Goals for the college. Section A consisted of 15 possible goals or aims of a college derived from a list of goals first developed by Gross, et al. (1968), and a set of goals suggested by the college administration as being applicable to the college. The respondents were asked to rate the goals on the basis of how important they should be as goals of the college.

Analysis of the data indicated that there are two major types of goal factors represented. Factor I was interpreted as representing a broad, general goal of providing students with a socially liberal education (see Appendix B). Goals with the highest factor loadings were particularly concerned with social awareness and remaining flexible and open to change. Factor II is a bipolar factor and was interpreted as

representing a goal of providing students with a socially conservative education (see Appendix C). High positive factor loadings were concerned with developing moral character and resistance to change, as opposed to high negative factor loadings which represent traditionally liberal goals of social awareness, flexibility, and protecting and facilitating the student's right to advocate or organize to attain political or social goals.

Summary of Student Input

Student goals and motivations. The most important reason given for originally attending the college was the opportunity for student-faculty interaction in a small college (3.8 on a 5-point scale); the least important reason was that it was a good place to find the type of spouse one wanted (1.8). Former students as a whole attributed more importance to the smallness of the college than to its Christian environment as a reason for attending the college ($p < .01$).

Summary of Student Experiences (Environment)

Goals of a liberal arts education. The alumni indicated that academic programs facilitated their progress toward the goals of a liberal arts education more than their activities programs ($p < .01$) or their living group experiences ($p < .01$), and that activities programs facilitated their progress toward the goals of a liberal arts education more than did living group experiences ($p < .01$).

Feelings about the college. Most alumni indicated they were quite satisfied with their present occupations (4.5 on a 5-point scale), and most alumni found the religious training they received at the college not very applicable to modern life (2.9).

Activities. The average respondent had participated in campus activities and clubs during approximately three out of the four years he spent at the college.

Life as a student. Most former students indicated that while at the college they had many casual friends (4.0 on a 5-point scale), and several (2.8) close friends or confidants. Most students said they participated often (3.4) in informal social activities, but that they never drank beer on campus (1.2), smoked on campus (1.4), and rarely sought counseling on personal matters (1.9).

Summary of Student Output

Alumni characteristics. Appendix L describes alumni in the sample according to various characteristics, giving the percentage of alumni which fall in each category.

Some important characteristics to be kept in mind with regard to the analyses in this study are:

1. 74.4% of the male and 62.2% of the female respondents attended graduate school.
2. 66.3% of the males and 69.7% of the females currently hold a job related to their major field of study.
3. 67.5% of the males and 65.6% of the females are holding white collar or professional jobs.
4. 37.4% of the males have an individual income between $5,001 and $10,000, whereas 48.7% of the females do. However, 50.6% of the males have an income of $10,000 or more, while there are only 16.8% of the females in this category.
5. Males reported spending more time than do females in both church ($p < .01$) and community ($p < .01$) activities.

Goals for the college. Alumni attributed most importance to the goals of maintaining top quality in all programs and producing a well-rounded student whose physical, social, moral, intellectual, and aesthetic potentialities have all been cultivated (4.5 on a 5-point scale). They attributed the least importance to developing the character of students so they can make sound moral choices (3.0). Also, former students generally attributed more importance to social liberal goals for the college than to social conservative goals ($p < .01$).

Results

Relationships between Student Input, College Experiences (Environment), and Alumni Characteristics (Output)

Differences between student factor scores for input and experience as a function of sex and whether they attended graduate school. No significant differences were found between students who attended graduate school and those who did not for any of the 11 experience factors (see Table 1). There

---

Insert Table 1 about here

---

were, however, two interaction effects (see Table 2). Females who did not

---

Insert Table 2 about here

---

attend graduate school, and males who did perceived their living group experiences at the college as facilitating the goals of a liberal arts education more than did females who attended and males who did not attend graduate school ($p < .05$). Also, females who did not attend graduate school, and males who did participated more in campus activities ($p < .025$).

Table 1

Input and Experience Factor Means for Male and Female Alumni

Who Did or Did Not Attend Graduate School

	Item	Male		Female	
		Attended graduate school (N=60)	Did not attend graduate school (N=23)	Attended graduate school (N=72)	Did not attend graduate school (N=47)
Input Factors	Liking for the smallness of the college	3.1	3.3	3.3	3.2
	Liking for the Christian environment	2.1	2.0	2.5	2.6
Environment Factors	Degree to which academic programs facilitated progress toward a liberal arts education	3.8	3.7	3.8	3.9
	Degree to which activities programs facilitated progress toward a liberal arts education	3.0	3.0	3.1	3.6
	Degree to which living group experiences facilitated progress toward a liberal arts education	3.1	2.9	2.9	3.4
	Average number of years participated in campus activities and clubs	3.0	2.7	2.9	3.1
	Campus-centered	2.9	2.7	2.5	2.5
	Social participation	3.7	4.0	3.9	3.7
	Active participation in education	3.9	4.2	3.9	3.9
	Positive evaluation of the college	2.3	2.3	2.2	2.3

Table 2

Degree to Which Living Group Experiences Facilitated Progress Toward A Liberal Arts Education

Source	SS	df	MS	F
(A) Did vs. did not go to graduate school	1.44	1	1.44	.96
(B) Sex	1.22	1	1.22	.81
(A x B)	6.08	1	6.08	4.05*
Residual	297.92	198	1.50	
Total	306.66	201		

Average Number of Years Participated in Campus Activities and Clubs

Source	SS	df	MS	F
(A) Did vs. did not go to graduate school	.09	1	.09	.19
(B) Sex	.55	1	.55	1.10
(A x B)	3.26	1	3.26	6.56**
Residual	98.36	198	.50	
Total	102.25	201		

*$p < .05$

**$p < .025$

Differences between student factor scores for input and experience as a function of sex and whether they held a job related to their major. No significant differences were found between those alumni who held a job related to their major and those who did not (see Table 3). There was

---

Insert Table 3 about here

---

one interaction effect (see Table 4) in which females who did not have

---

Insert Table 4 about here

---

a job related to their major and males who did perceived their living group experiences at the college as facilitating the goals of a liberal arts education more than females who held a job related to their major and males who did not ($p < .05$). A similar interaction was found above for females who did and males who did not attend graduate school. However, it should be noted that the population of females who did not attend graduate school and males who did is not equivalent to the population of females who did not hold jobs related to their major and males who did. Alumni were more apt to hold a job related to their major if they did not go to graduate school ($p < .05$).

Differences between student factor scores for input and experience as a function of their occupation. Ss were assigned to one of seven occupation categories in this analysis: unemployed, student, military, blue collar, clerical, white collar and professional, and clergy. Males and females in the same occupation categories were combined. Responses

Table 3

Input and Experience Factor Means for Male and Female Alumni

with High or Low Participation in Community Activities

	Item	Male		Female	
		Low participation in community activities (N=49)	High participation in community activities (N=34)	Low participation in community activities (N=95)	High participation in community activities (N=24)
Input Factors	Liking for the smallness of the college	3.0	3.4	3.2	3.5
	Liking for the Christian environment	2.2	2.0	2.7	2.2
Experience Factors	Degree to which academic programs facilitated progress toward a liberal arts education	3.7	3.9	3.8	4.0
	Degree to which activities programs facilitated progress toward a liberal arts education	2.9	3.1	3.3	3.2
	Degree to which living group experiences facilitated progress toward a liberal arts education	3.1	2.9	3.1	2.9
	Average number of years participated in campus activities and clubs	2.9	3.0	3.0	2.8
	Campus-centered	2.7	3.1	2.5	2.7
	Social participation	3.8	3.8	3.8	4.0
	Active participation in education	4.0	4.0	3.9	4.2
	Positive evaluation of the college	2.3	2.3	2.2	2.3

Table 4

Degree to Which Living Group Experiences Facilitated

Progress Toward A Liberal Arts Education

Source	SS	df	MS	F
(A) Did vs. did not hold a job related to major	.95	1	.95	.63
(B) Sex	1.57	1	1.57	1.04
(A x B)	5.82	1	5.82	3.85*
Residual	299.52	198	1.51	
Total	307.86	201		

*$p < .05$

from members of different occupations were then tested for differences on the 11 experience factors. Again no significant differences were found.

Differences between student factor scores for input and experience as a function of sex and income. Both males and females were divided into two groups according to their annual income. Those falling below the $5,001 category on the questionnaire were dropped from the sample in order to eliminate the unemployed and housewives for whom the category would not give a true indication of earning potential. The lower income category was from $5,001 to $10,000 annually, and the higher income category was $10,001 or more annually. No significant differences were found to exist between high and low income Ss on any of the nine experience factors.

Differences between student factor scores for input and experience as a function of sex and participation in church activities. Both males and females were divided into two groups consisting of those with low participation in church activities and those with high participation. The mean reported number of hours spent in church activities per month over all respondents was 8.7, and those who fell above or below this mean were classified as high and low in participation in church activities.

No significant differences were found to exist between respondents with high and low participation in church activities for any of the nine experience factors.

Differences between student factor scores for input and experience as a function of sex and participation in community activities. Males and females were divided into two groups consisting of those with high participation in community activities and those with low participation.

The mean number of hours spent in community activities per month over all Ss was 6.7, and those Ss falling above or below this mean were classified as high and low in participation in community activities.

Three significant differences were found between Ss with high vs. low participation in community activities (see Tables 5 and 6). Respondents

---

Insert Table 5 about here

Insert Table 6 about here

---

with high participation in community activities had a greater liking for the smallness of the college ($p < .025$) and were more campus-centered ($p < .01$). Those with low participation in community activities had a greater liking for the Christian environment of the college than those Ss with high participation ($p < .025$).

Differences between student factor scores for input and experience as a function of importance attributed to social liberal goals for the college. Alumni were divided into two groups consisting of those who attributed high importance to relevant goals for the college and those who attributed low importance to these goals. Those whose social liberal factor score was above the mean of 3.75 for the factor were assigned to the high social liberal group, and those below the mean to the low social liberal group. The high vs. low social liberal groups were then tested for differences in input and experience factors. Alumni who attributed high importance to social liberal goals were found to differ in two ways

Table 6

Liking for the Smallness of the College

Source	SS	df	MS	F
(A) High vs. low participation in community activities	4.83	1	4.83	5.12**
(B) Sex	1.07	1	1.07	1.34
(A x B)	.02	1	.02	.02
Residual	186.75	198	.94	
Total	192.67	201		

Campus-Centered

Source	SS	df	MS	F
(A) High vs. low participation in community activities	3.16	1	3.16	8.06***
(B) Sex	3.37	1	3.37	8.59***
(A x B)	.42	1	.42	1.08
Residual	77.57	198	.39	
Total	84.52	201		

Liking for the Christian Environment

Source	SS	df	MS	F
(A) High vs. low participation in community activities	3.63	1	3.63	5.02**
(B) Sex	5.55	1	5.55	7.67***
(A x B)	.45	1	.45	.62
Residual	143.11	198	.72	
Total	152.74	201		

**$p < .025$
***$p < .01$

from those who attributed low importance to these goals. They had a greater liking for the smallness of the college ($t(200) = 2.40$, $p < .025$) and were more campus-centered ($t(200) = 2.18$, $p < .025$).

Differences between student factor scores for input and experience as a function of importance attributed to social conservative goals for the college. Alumni who attributed high importance to social conservative goals for the college were compared with those who attributed low importance to these goals. Alumni whose social conservative factor score was above the mean of 3.67 for the factor were assigned to the high social conservative group, and those below the mean to the low social conservative group. The high vs. low social conservative groups were then tested for differences in input and experience factors.

Alumni who attributed high importance to social conservative goals expressed greater liking for the Christian environment of the college ($t(200) = 1.74$, $p < .05$). They also participated more in informal social activities ($t(200) = 3.51$, $p < .005$) and took a more active part in education than those who attributed less importance to social conservative goals ($t(200) = 1.98$, $p < .025$). Alumni who attributed less importance to these goals were found to participate more in campus activities ($t(200) = 1.71$, $p < .05$) and to be more campus-centered ($t(200) = 2.53$, $p < .01$).

Differences between student factor scores for input and experience as a function of sex. Females attributed more importance to social liberal goals for the college than did males ($p < .025$), but also attributed more importance to social conservative goals. This is perhaps because females attribute more importance in general to various goals

than males. Also, females were found to have a greater liking for the Christian environment of the college than males ($p < .01$) and were not as campus-centered ($p < .025$).

Discussion

Relationships between Student College Experience and Output

No major differences in college experiences were found between students who attended graduate school and those who did not. However, females who did not go to graduate school and males who did appear to have something in common. They perceived their living group experiences as facilitating the goals of a liberal arts education, and they participated more in campus activities and clubs. Thus, they seem to have been more socially oriented while at the college, and to have derived more from their social environment than did females who attended graduate school and males who did not.

One possible explanation for this finding might be that social orientation is related to typical sexual roles, and that males and females who go to graduate school deviate from these typical norms. Socially oriented service behavior is typically a "female" tendency, and socially oriented females tend not to go on to graduate school. Males who are socially oriented attend graduate school and most likely end up with white collar, more service-oriented (and thus more "feminine") jobs than those males who do not go on to graduate school. Males who did not attend graduate school were found to be non-socially oriented and they are, therefore, probably less service-oriented. Females who go on to graduate school can be seen as deviating from the female norm; they are non-socially oriented and, therefore, perhaps have more "male"

oriented goals than females who do not attend graduate school, i.e., they are more achievement oriented. This raises the possibility that males and females may differ somewhat in the amount of importance they attribute to various reasons given for attending graduate school. Females who go on to graduate school probably attribute more importance to achieving, whereas males who go to graduate school may attribute more importance to having a job they consider relevant and satisfying.

No significant differences were found between alumni who held a job related to their major and those who did not. However, another interaction effect with sex was found: males who did, and females who did not hold a job related to their major perceived their living group experiences at the college as facilitating the goals of a liberal arts education. This was less true of females who held a job related to their major and males who did not. (Note, however, that students who went to graduate school were more apt to hold a job related to their major).

In general, the analyses comparing different occupations on all nine experience factors indicate that the students' college experiences were not related to their later occupations, and neither were they related to their later incomes.

The Effects of College Environment on Different Types of Students

Factor analysis of the reasons why students chose to attend the college indicated two major types of students: those who chose to attend the college because they liked its smallness and those who chose to attend the college because they liked its Christian environment. Analyses of the relationships between this student input, student college experiences

(environment), and student outputs reveal some interesting patterns (see Figure 2).

Insert Figure 2 about here

Former students who attended the college because they liked its smallness reported distinctly different kinds of experiences while at the college and they also reported distinctly different kinds of output than those former students who attended the college because they liked its Christian environment.

Students who attended the college because they liked its smallness were generally more socially oriented and socially liberal. They were found to be very campus-centered and to have high participation in campus activities and clubs while at college. After graduation these former students reported high participation in community activities and they attributed greater importance to social liberal goals for the college.

Former students who attended the college because they liked its Christian environment indicated more participation in informal social activities. They also actively participated in education and interacted more with faculty. After graduation they reported low participation in community activities and they attributed greater importance to social conservative goals for the college.

The above evidence indicates that the effect of the college environment in bringing about changes in the student is at best limited. To the extent that alumni are able to recall accurately their reasons for attending the college, it appears as if students tend to seek out those

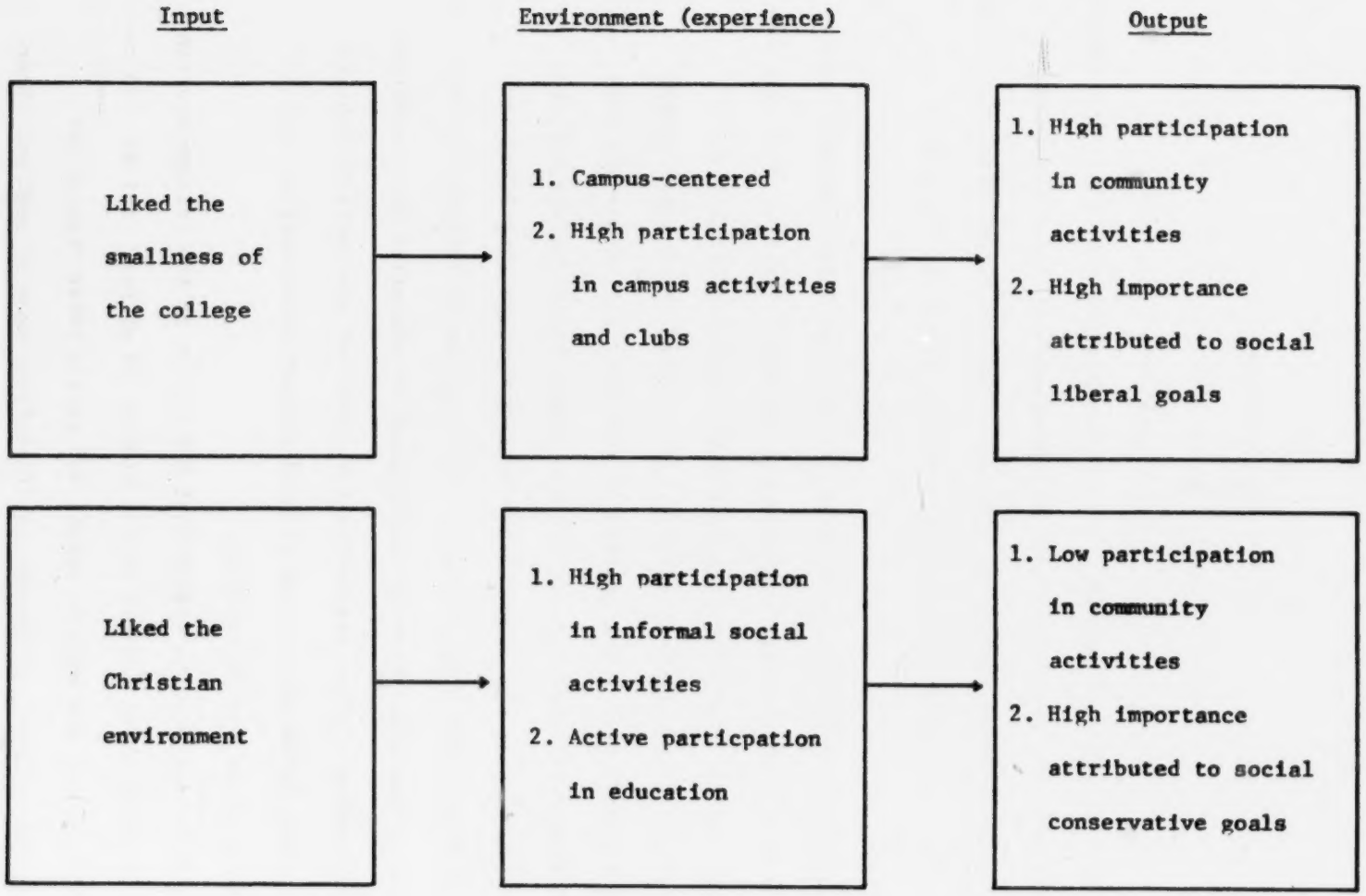
Input
Environment (experience)
Output
Liked the smallness of the college
1. Campus-centered
2. High participation in campus activities and clubs
1. High participation in community activities
2. High importance attributed to social liberal goals
Liked the Christian environment
1. High participation in informal social activities
2. Active particpation in education
1. Low participation in community activities
2. High importance attributed to social conservative goals

Figure 2

college experiences which reinforce their already existing beliefs and interests. Students who value different aspects of the college environment tend to have both different experiences at college and after graduation.

References

Astin, A. W. Effects of different college environments on the vocational choices of high aptitude students. Journal of Counseling Psychology, 1965, 12, 28-34.

Astin, A. W. The methodology of research on college impact, part one. Sociology of Education, 1970, 43, 223-254.

Astin, A. W. A program of research on student development. Journal of College Student Personnel, September, 1968, 299-307.

Bulletin of Judson Baptist College. Portland, Oregon: Judson Baptist College, March, 1970.

California Lutheran College Bulletin. Thousand Oaks, California: California Lutheran College, 1970-1971.

Newcomb, T. M. Personality and social change. New York: Holt, Pinehart, and Winston, 1943.

Whitworth College Catalogue. Spokane, Washington: Whitworth College, 1970-1971.

Footnotes

1. This study was supported by a grant from the U. S. Office of Education, O. E. Bureau of Research No. 0-0340, Grant No. OEG-0-70,3347 (Fred E. Fiedler, Principal Investigator).

Figure Captions

Figure 1. Astin's model of higher educational institutions.

Figure 2. Pattern of relationships between student input, college experience (environment), and student output.

Appendix A

The Questionnaire

Code No._____

INTRODUCTION

Please notice the code number at the top of this page. This number has been arbitrarily assigned to your questionnaire to help us assure the representativeness of our sample as well as to preserve the anonymity of your responses. All of your responses are STRICTLY CONFIDENTIAL. If you would rather not answer a particular question, please feel free to leave it blank.

When you have completed the entire questionnaire, please use the enclosed envelope to return it to the Organizational Research Group at the University of Washington where the questionnaires will be processed and analyzed. Your time and cooperation in this important project are sincerely appreciated. Thank you.

SECTION A: Goals for College

One of the great issues in American education has to do with the proper aims or goals of a college or university. The question is: "What are we trying to accomplish? Are we trying to prepare people for jobs, to broaden them intellectually or what?" Below we have listed a number of the more commonly claimed aims, intentions, or goals of colleges such as The faculty at College recently rated these items and now we feel it is important to know how our alumni feel about the same issues. Please rate the items below on the basis of how important each <u>should be</u> as a goal for College. Put the number of one of the alternatives below in the blank next to the item number of each statement.

1. Should be of no importance
2. Should be somewhat important
3. Should be of average importance
4. Should be quite important
5. Should be of maximum importance

___ 1. To develop the character of students so they can make sound moral choices.

___ 2. To provide special training for part-time adult students through extension courses, special short courses, correspondence courses, etc.

___ 3. To educate to his utmost capacities every high school graduate who meets the basic requirements for admission.

___ 4. To keep up-to-date and responsive to the needs of society.

___ 5. To make College a place in which faculty have maximum opportunity to pursue their careers in a manner satisfactory to them by their own criteria.

___ 6. To ensure that faculty salaries, teaching assignments, and privileges reflect the contribution that the person involved is making to the college.

___ 7. To maintain top quality in all programs.

___ 8. To preserve particular emphases and point of view, its "character", as you remember it.

___ 9. To establish an environment which encourages the integration of all experiences with a carefully considered Christian philosophy of life.

___10. To encourage capable students to go into graduate work.

___11. To produce a well-rounded student, that is, one whose physical, social, moral, intellectual and aesthetic potentialities have all been cultivated.

___12. To protect and facilitate the student's right to advocate or to organize efforts to attain political or social goals.

___13. To provide a curriculum sufficiently flexible to accomodate the special interests of students.

___14. To prepare a student for an occupation or profession.

___15. To provide a setting for meeting persons with different social backgrounds and experiences.

SECTION B: Student Goals and Motivations

We are interested in our alumni's reasons for initially enrolling at College and the goals which they hoped to obtain from a college education. Please rate the importance of each item below as it applied to you when you first enrolled at College. Feel free to add any important reasons or goals which you feel are missing. Use the scale listed below:

1. Of no importance
2. Somewhat important
3. Of average importance
4. Quite important
5. Of maximum importance

___ 1. I liked the location of the school.

___ 2. An education from would allow me to enter a challenging and satisfying career.

___ 3. College was recommended by its alumni.

___ 4. was recommended by students who were attending there at the time.

___ 5. I wanted a Christian education.

___ 6. My parents wanted me to attend College.

___ 7. I felt that would be a good place to find the type of spouse I wanted.

___ 8. I liked the small size of the classes.

___ 9. I felt that I would get good preparation for graduate or professional school at College.

___10. I liked the opportunity for student-faculty interaction in a small college.

Other goals: Importance

_____ ___

_____ ___

_____ ___

11. How much did the education you received at Whitworth fulfill your own personal goals? Please check one of the following:

_____1. Not at all
_____2. Slightly
_____3. Moderately
_____4. Mostly
_____5. Nearly completely fulfilled

3

SECTION C: Goals of a liberal Arts Education

Following is a series of statements reflecting more specific goals and objectives of a liberal arts higher education. We would like to know if in your judgment your experiences at facilitated your progress toward these goals, or may in your judgment have hindered your progress toward these goals. Using the scale below, please rate the degree to which each of the three categories of experiences at (i.e., (1) Academic Programs, (2) Activities Programs, (3) Living Group Experiences) either facilitated or hindered your progress toward a particular objective

1. Facilitated very much
2. Facilitated somewhat
3. Had no effect
4. Hindered somewhat
5. Hindered very much

	Academic Programs	Activities Programs	Living Group Experiences
1. Ability to synthesize and apply theories and concepts to real world events and problems.	___	___	___
2. Awareness of when it is necessary and how to evaluate the authenticity of information (to evaluate information critically.)	___	___	___
3. Ability to understand the communication of others, whether written, verbal, spoken, or unspoken.	___	___	___
4. Ability to express myself and my ideas authentically through writing and speaking.	___	___	___
5. Enabling me to find satisfaction in and work effectively in groups.	___	___	___
6. Preparing me to work for the solution of contemporary issues and problems.	___	___	___
7. Developing an attitude of inquiry that extends beyond college to my total life now.	___	___	___
8. Developing a greater tolerance and understanding of others including those of other cultural backgrounds.	___	___	___
9. Developing a greater understanding of my own motives and values.	___	___	___
10. Being open to change.	___	___	___
11. Creativity in problem solving.	___	___	___
12. Ability to create and maintain rewarding interpersonal relationships.	___	___	___
13. Realistic preparation for marriage.	___	___	___

4

SECTION D: What did you do while at ?

For each of the following items, please check the year or years that apply. For example, if you participated in college athletics only during your Freshman year, you would place a check in the appropriate space. However, if you participated in college athletics during your Freshman, Sophomore, and Junior years, you would place a check in all three spaces.

	Freshman	Sophomore	Junior	Senior	5th Year
1. Participated in college athletics.	___	___	___	___	___
2. Participated in college music organizations.	___	___	___	___	___
3. Participated in drama.	___	___	___	___	___
4. Participated in debate.	___	___	___	___	___
5. Participated in campus student government	___	___	___	___	___
6. Participated in religious clubs or groups.	___	___	___	___	___
7. Participated in Bible study groups.	___	___	___	___	___
8. Acted as advisor for youth group.	___	___	___	___	___
9. Participated in religious conference.	___	___	___	___	___
10. Lived in dormitory on campus.	___	___	___	___	___
11. Lived at home with parents.	___	___	___	___	___
12. Lived in private house or apartment off campus.	___	___	___	___	___
13. Lived at home with spouse.	___	___	___	___	___
14. Received scholarships.	___	___	___	___	___
15. Obtained student loans for school (any source)	___	___	___	___	___
16. Received scholastic recognition or award (not scholarship)	___	___	___	___	___
17. Personal automobile available.	___	___	___	___	___
18. Got married.	___	___	___	___	___
19. Worked for an academic department on campus.	___	___	___	___	___
Average number of hours per week.	___	___	___	___	___
20. Worked during college term (NOT academic department).	___	___	___	___	___
Average number of hours per week.	___	___	___	___	___
21. When did you first declare a major area at Whitworth?	___	___	___	___	___
What was the major you declared at that time?_____					

Please list all succeeding changes in major and the year in which you made the change (Freshman, etc.) up to and including your final (degree) major. _____

_____

_____

SECTION E: You as a student at

For each item please indicate the alternative that most accurately describes your life while at College. For items 1 and 2 use the following scale:

1. None
2. One or two
3. Several
4. Many
5. Very many

_____ 1. Had casual friends.

_____ 2. Had close friends or confidants.

Use the following scale for the items below:

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Almost always

_____ 3. Participated in informal social activities.

_____ 4. Studied with other students.

_____ 5. Talked informally with faculty members about non-course related matters.

_____ 6. Visited home of faculty members (except for regularly scheduled classes).

_____ 7. Consulted individually with faculty members on course related matters.

_____ 8. Participated actively in classroom discussions.

_____ 9. Did extra unassigned reading for a course.

_____10. Argued with an instructor or with other students in class.

_____11. Sought counseling on personal matters.

_____12. Smoked on campus.

_____13. Drank beer on campus.

_____14.

Please use the following scale for items 15 and 16.

1. Not at all
2. Very little
3. Moderately
4. Very much
5. Almost completely

_____15. To what extent were you in the "philosophical mainstream" of student life while you were at College?

_____16. To what extent were you in the "life-style mainstream" of student life while you were at College?

6

SECTION F: You and your feelings about College

PLEASE USE THE FOLLOWING SCALE FOR ITEMS 1 AND 2.

1. Very dissatisfied
2. Somewhat dissatisfied
3. Neither satisfied or dissatisfied
4. Somewhat satisfied
5. Very satisfied

___ 1. How satisfied are you with your overall education from ?

___ 2. How satisfied are you with your present occupation?

PLEASE USE THE FOLLOWING SCALE FOR ITEMS 3 THROUGH 5.

1. Very inadequate
2. Somewhat inadequate
3. Neither adequate nor inadequate
4. Somewhat adequate
5. Very adequate

___ 3. How adequate was your education from in preparing you for your occupation or for continuing your occupational preparation?

___ 4. How adequate was your education from in preparing you for satisfying interactions with other people?

___ 5. How adequate was the quality of instruction you received in your major (degree) area?

PLEASE USE THE FOLLOWING SCALE FOR ITEMS 6 AND 7.

1. Very easy
2. Somewhat easy
3. Of average difficulty
4. Somewhat difficult
5. Very difficult

___ 6. In general, how difficult were the courses in your major (degree) area at ?

___ 7. In general, how difficult were the courses outside of your major area?

PLEASE USE THE FOLLOWING SCALE FOR ITEM 8.

1. Completely inapplicable
2. Only slightly applicable
3. Moderately applicable
4. Quite applicable
5. Very applicable

___ 8. How applicable to modern life is the religious training you received from ?

PLEASE USE THE FOLLOWING SCALE FOR ITEMS 9 THROUGH 17

1. Definitely not
2. Not sure, but probably no
3. Uncertain or don't know
4. Not sure, but probably yes
5. Definitely yes

___ 9. Was 1st choice among the colleges and universities you considered attending?

___10. Did you plan to graduate from at the time you enrolled?

___11. Did you plan to continue your education in a graduate or professional school at the time you first enrolled at College?

___12. Do you feel that the moral level of students is generally higher than the moral level at the average state college or university?

___13. Do you feel that your experiences at contributed to an open-minded and objective approach to issues?

___14. Would you recommend College to able young friends?

___15. Would you consider sending your son to College? (Please answer even if you do not have a son).

___16. Would you consider sending your daughter to College? (Please answer even if you do not have a daughter).

___17. If you had it to do over, would you attend College again?

7

SECTION G: What did you do after graduation?

1. Did you attend graduate or professional school since graduation from College?
_____No_____Yes If yes, where?_____Major_____Degree_____

How adequately were you prepared for graduate or professional school? (check one)

___1. Very inadequately ___3. Neither adequately nor inadequately ___5. Very adequately
___2. Somewhat inadequately ___4. Somewhat adequately

2. Have you ever served in the armed forces of the United States? ____Yes ____No

3. Are you now working at a job related to your major field of study at ?___Yes___No

4. Please briefly describe the jobs you have held since graduation to the present in order. (For example, do not say "salesman" or "teacher." Be specific: "Salesman in a department store," or "mathematics teacher in a consolidated high school," etc.)

a._____ d._____

b._____ e._____

c._____ f._____

5. About how many hours per month do you spend in community activities outside of church-related activities?_____

6. About how many hours per month do you now spend in church-related activities (outside of regular worship services)?_____

7. What is your present religious affiliation or preference? (If Protestant, please indicate specific denomination.)_____

8. Marital Status (Please check the most appropriate alternative)

_____Single _____Divorced _____Widowed
_____Married _____Divorced and remarried

9. Children: _____Number of boys _____Number of girls

10. What is your approximate annual income at present? (check one)

_____1. None _____4. $10,001 to $15,000
_____2. Less than $5,000 _____5. $15,001 to $20,000
_____3. $5,001 to $10,000 _____6. Over $20,000

11. If you are married, what is the approximate annual income of your spouse? (check one)

_____1. None _____4. $10,001 to $15,000
_____2. Less than $5,000 _____5. $15,001 to $20,000
_____3. $5,001 to $10,000 _____6. Over $20,000

12. What was the approximate population of the community or area in which you lived at the time you first enrolled at Whitworth College? (Check one)

_____1. Open country to 2,499 _____3. 10,000-49,999 _____5. 100,000 and over
_____2. 2,500 to 9,999 _____4. 50,000 to 99,999

13. Please mark the highest level of education obtained by your father.
___1. Less than high school diploma ___3. 2 years college ___5. Master's degree
___2. High School diploma ___4. Bachelor's degree ___6. Ph.D. or professional degree

14. What is or was the main occupation of your father or head of household?_____
_____

Appendix B

Questionnaire Section A: Goals for the College

Factor I: Social Liberalism*

.56 To keep up-to-date and responsive to the needs of society.

.54 To maintain top quality in all programs.

.49 To provide a curriculum sufficiently flexible to accommodate the special interests of the students.

.48 To provide a setting for meeting persons with different social background and experiences.

.48 To protect and facilitate the student's right to advocate or to organize efforts to attain political and social goals.

.47 To educate to his utmost capacity every high school graduate who meets the basic requirements for admission.

.47 To encourage capable students to go into graduate work.

.45 To make the College a place in which faculty have maximum opportunity to pursue their careers in a manner satisfactory to them by their own criteria.

.41 To ensure that faculty salaries, teaching assignments, and privileges reflect the contribution that the person involved is making to the College.

.39 To prepare a student for an occupation or profession.

.35 To provide special training for part-time adult students through extension courses, special short courses, correspondence courses, etc.

*This factor accounted for 16.8% of the total variance.

Appendix C

Questionnaire Section A: Goals for the College

Factor II: Social Conservatism*

(social conservatism)

.68 To preserve the College's particular emphases and point of view, its "character," as you remember it.

.65 To develop the character of students so they can make sound moral choices.

.65 To establish an environment which encourages the integration of all experiences with a carefully considered Christian philosophy of life.

(social liberalism)

-.41 To protect and facilitate the student's right to advocate or to organize efforts to attain political or social goals.

-.38 To provide a curriculum sufficiently flexible to accommodate the special interests of students.

-.29 To provide a setting for meeting persons with different social backgrounds and experiences.

*This factor accounted for 12.8% of the total variance.

Appendix D

Questionnaire Section B: Student Goals and Motivations

Factor I: Liking for the Smallness of the College*

.67 I liked the opportunity for student-faculty interaction in a small college.

.66 I liked the small size of classes.

.57 I felt that I would get good preparation for graduate or professional school at the College.

.56 An education from the College would allow me to enter a challenging and satisfying career.

Factor II: Liking for the Christian Environment**

.54 I wanted a Christian education.

.51 I felt that the College would be a good place to find the type of spouse I wanted.

.50 The College was recommended by its alumni.

.45 The College was recommended by students attending there at the time.

.32 My parents wanted me to attend the College.

*This factor accounted for 16.8% of the total variance.

**This factor accounted for 12.0% of the total variance.

Appendix E

Questionnaire Section C: Goals of a Liberal Arts Education

Factor I: Degree to which Academic Programs Facilitated Progress toward Goals of a Liberal Arts Education*

.80 Developing an attitude of inquiry that extends beyond college to my total life now.

.79 Creativity in problem solving.

.78 Ability to understand the communication of others, whether written, verbal, spoken, or unspoken.

.77 Ability to express myself and my ideas authentically through writing and speaking.

.77 Developing a greater understanding of my own motives and values.

.76 Developing a greater tolerance and understanding of others including those of other cultural backgrounds.

.75 Preparing me to work for the solution of contemporary issues and problems.

.74 Being open to change.

.73 Ability to synthesize and apply theories and concepts to real world events and problems.

.72 Awareness of when it is necessary and how to evaluate the authenticity of information (to evaluate information critically).

.70 Ability to create and maintain rewarding interpersonal relationships.

.65 Enabling me to find satisfaction in and work effectively in groups.

.55 Realistic preparation for marriage.

*This factor accounted for 53.8% of the total variance.

Appendix F

Questionnaire Section C: Goals of a Liberal Arts Education

Factor II: Degree to which Activities Programs Facilitated Progress toward Goals of a Liberal Arts Education*

.93 Ability to create and maintain rewarding interpersonal relationships.

.92 Developing a greater understanding of my own motives and values.

.90 Developing a greater tolerance and understanding including those of other cultural backgrounds.

.90 Awareness of when it is necessary and how to evaluate the authenticity of information (to evaluate information critically).

.89 Ability to express myself and my ideas authentically through writing and speaking.

.89 Developing an attitude of inquiry that extends beyond college to my total life now.

.89 Creativity in problem solving.

.88 Preparing me to work for the solution of contemporary issues and problems.

.88 Being open to change.

.88 Enabling me to find satisfaction in and work effectively in groups.

.87 Ability to understand the communication of others, whether written, verbal spoken, or unspoken.

.82 Ability to synthesize and apply theories and concepts to real world events and problems.

.80 Realistic preparation for marriage.

*This factor accounted for 77.9% of the total variance.

Appendix G

Questionnaire Section C: Goals of a Liberal Arts Education

Factor III: Degree to which Living Group Experiences Facilitated Progress toward Goals of a Liberal Arts Education*

.94 Developing a greater understanding of my own motives and values.

.94 Ability to create and maintain rewarding interpersonal relationships.

.94 Enabling me to find satisfaction in and work effectively in groups.

.93 Developing a greater tolerance and understanding of others including those of other cultural backgrounds.

.92 Ability to express myself and my ideas authentically through writing and speaking.

.92 Ability to understand the communication of others, whether written, verbal, spoken, or unspoken.

.91 Creativity in problem solving.

.91 Developing an attitude of inquiry that extends beyond college to my total life now.

.91 Preparing me to work for the solution of contemporary issues and problems.

.91 Awareness of when it is necessary and how to evaluate the authenticity of information (to evaluate information critically).

.90 Being open to change.

.87 Ability to synthesize and apply theories and concepts to real world events and problems.

.78 Realistic preparation for marriage.

*This factor accounted for 82.7% of the total variance.

Appendix H

Questionnaire Section D: Activities

Factor I: Participation in Campus Activities and Clubs*

.61 Participated in religious clubs or groups.

.54 Participated in religious conference.

.50 Participated in bible study groups.

.49 Lived in dormitory on campus.

.47 Received scholastic recognition or award (not scholarship).

.46 Acted as advisor for youth group.

.44 Received scholarships.

.33 Obtained student loans for school (any source).

.33 Participated in drama.

.32 Worked during college term (not academic department).

.30 Worked for an academic department on campus.

.28 Participated in college music organizations.

.20 Participated in college athletics.

*This factor accounted for 15.5% of the total variance.

Appendix I

Questionnaire Section D: Activities

Factor II: Campus-centered*

(campus-centered)

.54 Lived in dormitory on campus.

.38 Participated in religious conference.

.26 Participated in religious clubs or groups.

.23 Participated in bible study groups.

(off-campus-centered)

-.58 Lived at home with spouse.

-.51 Personal automobile available.

-.41 Lived in private house or apartment off campus.

-.33 Got married.

-.29 Obtained student loans for school (any source).

-.27 Lived at home with parents.

-.27 Worked during college term (not academic department).

*This factor accounted for 6.0% of the total variance.

Appendix J

Questionnaire Section E: Life as a Student

Factor I: Social Participation*

.79 Participated in informal social activities.

.73 To what extent were you in the "life-style mainstream" while you were at the College?

.72 Had casual friends.

.67 To what extent were you in the "philosophical mainstream" of student life while you were at the College?

.58 Had close friends or confidants.

.52 Studied with other students.

.42 Visited home of faculty members (except for regularly scheduled classes).

Factor II: Active Participation in Education**

.67 Talked informally with faculty members about non-course related matters.

.65 Participated actively in classroom discussions.

.63 Argued with instructor or with other students in class.

.61 Consulted individually with faculty members on course-related matters.

.49 Did extra unassigned reading for a course.

.47 Visited home of faculty members (except for regularly scheduled classes).

*This factor accounted for 22.4% of the total variance.

**This factor accounted for 14.0% of the total variance.

Appendix K

Questionnaire Section F: Feelings about the College

Factor I: Positive Evaluation of the College*

.95 Would you consider sending your daughter to the College?

.95 Would you consider sending your son to the College?

.90 Would you recommend the College to able young friends?

.74 If you had it to do over, would you attend the College again?

.57 Do you feel your experiences at the College contributed to an open-minded and objective approach to issues?

.57 How applicable to modern life is the religious training you received from the College?

.56 Do you feel that the moral level of the College's students is generally higher than the moral level at the average state college?

.48 How satisfied are you with your overall education from the College?

Factor II: Positive Evaluation of Education at the College**

.67 How adequate was your education from the College?

.61 How satisfied are you with your overall education from the College?

.56 How adequate was the quality of instruction you received in your main (degree) area?

.42 How satisfied are you with your present occupation?

.35 In general, how difficult were the courses in your major (degree) area at the College?

.34 How adequate was your education from the College in preparing you for satisfying interactions with other people?

*This factor accounted for 7.6% of the total variance.

**This factor accounted for 31.0% of the total variance.

Appendix L

Alumni Description Table

Item		Percentage Frequency Male	Female
Attended graduate school		74.7	62.2
Served in military		33.7	0.0
Marital status	Single	9.6	17.7
	Married	83.1	76.5
	Divorced	7.2	5.0
Average number of children		1.0	1.0
Job category	Unemployed	2.4	22.7
	Student	6.0	1.7
	Military	1.2	0.0
	Blue collar	9.6	7.6
	Clerical	0.0	2.5
	White collar or Professional	67.5	65.6
	Clergy	13.3	0.0
Average hours per month spent in community activities		9.8	4.3
Average hours per month spent in church activities		13.1	5.4
Holding a job related to major		66.3	69.7
Income category	None	4.8	21.0
	Less than $5,000	7.2	13.5
	$5,001 to $10,000	37.4	48.7
	$10,001 to $15,000	44.6	16.8
	$15,001 to $20,000	2.4	0.0
	Over $20,000	3.6	0.0